



## Transportation Center



Moving forward

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## New circumstances, leadership, opportunities

- Objective: Define a new future for TC
  - Accommodate, lead change
  - Position in McC focuses efforts, opens new gateways
  - Interdisciplinary tradition remains strong: McC connections
    - Joint appointments
    - MMM
    - Research centers



## McCormick Centers

- Advanced Cement-Based Materials
- Atomic and Nanoscale Characterization Experimental User Center
- Bioengineering Educational Technologies
- Biologically Inspired Materials
- Center for Quantum Devices
- Communications Research
- Devlab
- Infrastructure Technology Institute
- Institute for Design Engineering and Applications
- Intelligent Processing of Composites
- Nanofabrication & Molecular Self-Assembly
- Optimization Technology
- Parallel & Distributed Computing
- Photonic Communications and Computing
- Quality Engineering & Failure Prevention
- Quantum Devices
- Steel research center
- Surface Engineering and Tribology
- Transportation Center



## Objective: Renew transportation research

- Criteria
  - Excellence
  - Faculty engagement
  - Salience
  - Advance state of knowledge & practice
  - Educate tomorrow's scholars & professionals
- Faculty motivation: achievement, success
  - Real & interesting problems to be solved: research opportunities
    - Bridge to BAC, government...
  - Publications
  - Successful students
  - Learning & teaching opportunities
    - For research and academia
    - For business and government



## Renewing research (2)

- New directions
  - McCormick connection
    - Materials
    - Energy
    - Design & manufacturing
    - Information technology
  - Center linkages
    - Institute for Design Engineering & Application: IDEA
    - Complexity – NICO – networks, organizations
    - IPR – transportation and social policy



## Current Research Thrusts

- Infrastructure and Technology
- Logistics and Network Design, Operations and Reliability
- Mobility, Health, Environment and Sustainability
- Transportation Network Service Security and Safety
- Policy, Planning, and Project Implementation

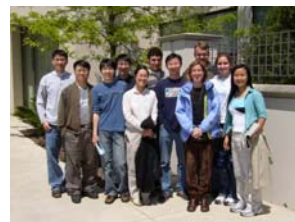
## Corporate Research Connections

- Programmatic – multi-firm
- Partnerships
- Technical links to companies
- State of the practice workshops
  - What's new
  - what's needed
- Visits and exchanges



## Objective: Maintain educational efforts

- Undergraduate students
  - T & L minor
    - Enrollments are growing
    - Commitment to continuing
    - Requires sustaining support
  - Departmental programs
    - IE/MS, CEE, Econ
    - Co-op & placement connections
  - Graduate programs – MS & PhD
    - KSM, Econ, IE/MS, CEE
    - Professional MS: MPM, MMM, MEM
    - Linked with research for financial support



## Objective: New organizational structure

- Julio Ottino, Dean
- Bob Gallamore, Director
- Faculty executive committee: from WCAS, KSM and McC;
- Staffing: driven by needs, limited by resources
- Patterson chair...



## Objective: Ensure BAC connection

- Guidance – understanding and advice
- Forum for discussion, exploration, networking
- Access to ideas, problems, data
- McCormick Office of Industrial Relations
- Students
  - Motivation – affecting next generation
  - Placement - hiring next generation
  - Walter P. Murphy Cooperative Education Program
- Collaborative research
- Executive education
- Support of the TC enterprise
  - Academic
  - research



## Discussion

